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Abstract

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Keywords

CAHRS, ILR, center, human resource, job, worker, advanced, labor market, satisfaction, employee, work, manage, management, health care, flexible benefit, HRM, employ, model, industrial relations, labor market, job satisfaction, job performance, productivity, measurement, compensation, pay, voluntary turnover, salary, pay level, benefit, pay raise, job growth, managerial, employment growth, college degree

Comments

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INDIVIDUAL-LEVEL DETERMINANTS
OF THE PROPENSITY TO SHIRK

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Working Paper # 90-26

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Abstract

Employee shirking, where workers give less than full effort on the job, has typically been investigated as a construct subject to group and organization-level influences. Neglected are individual differences that might explain why individuals in the same organization or work-group might shirk. The present study sought to address these limitations by investigating subjective well-being (a dispositional construct), job satisfaction, as well as other individual-level determinants of shirking behavior. Results identified several individual-level determinants of shirking. Implications of the results are discussed.

INDIVIDUAL-LEVEL DETERMINANTS OF THE PROPENSITY TO SHIRK

Over the past decade considerable attention has been given to the issue of employee work effort or, more accurately, the lack thereof. Concern over employee shirking, as it is often called, has led to the use of electronic monitoring in some workplaces (Chalykoff and Kochan, 1989). Such practices have been met with considerable disdain by employees who view this as an infringement upon their privacy (Garson, 1988). Scholars in labor economics and organizational behavior who have examined employee shirking have tended to approach the issue from the organizational level, focusing primarily on various organizational practices which can be implemented to discourage its occurrence (Groshen and Krueger, 1990; Jones, 1984; Kahn and Sherer, 1990). While these literatures have provided considerable insight into the issue, they ignore individual-level determinants of shirking that might cause differences in the propensity to shirk for similarly situated employees.

In this paper, we specify a model of individual-level determinants of shirking, focusing on 1) employee affect, 2) alternative employment opportunities, and 3) employer monitoring. When subjected to empirical testing, the model performs very well. The degree of employee shirking was found to depend significantly on employee levels of subjective well-being and job satisfaction. Specifically, employees who are dissatisfied with their jobs or are generally unhappy in life are more likely to shirk than employees who are not. This suggests that employee shirking may be a manifestation of an adaptive mechanism where employees shirk or engage in other withdrawal behaviors to cope with personally unpleasant circumstances (Hulin, in press). The results provided mixed support for the effect of labor market alternatives and monitoring on the degree to which employees shirk.

SHIRKING AND ORGANIZATIONAL PRACTICES

A basic premise underlying much of the shirking literature is that in the absence of effective employer monitoring, employees will reduce their work effort (i.e., shirk).

The reduction in work effort occurs because employees' interests do not necessarily coincide with their employer's. If they can avoid detection, employees will prefer greater amounts of on-the-job leisure for a given wage. This represents a serious problem to firms since effective employer monitoring is often impractical due to costs and difficulties associated with measuring employee productivity. These problems are thought to be especially pronounced when there is collective production (Ouchi, 1977), particularly when large work groups are involved because of the anonymity associated with large group situations (Latane, Williams, and Harkins, 1979; Leibowitz and Tollison, 1980; Weldon and Gargano, 1985).

Scholars in labor economics and organizational behavior have given considerable attention to various policies firms can use to elicit an optimal level of employee work effort. Two possibilities are generally discussed--encourage self-monitoring by employees or improve the effectiveness of employer monitoring. Both types of literature suggest that employer monitoring difficulties can be at least partially alleviated using various compensation policies which increase self-monitoring by employees.¹ Because workers are assumed to shirk when the utility gained from shirking exceeds the utility gained from working, the policies suggested either increase the cost of shirking or conversely the value of working.

Specific compensation policies commonly discussed in the economics literature are 1) the payment of supracompetitive wages, i.e., efficiency wages (Akerloff, 1984; Shapiro and Stiglitz, 1984; Yellen, 1984), 2) the payment of wages that are at first below and then later exceed current marginal product (Lazear, 1979, 1981), and 3) the use of "tournaments" whereby workers compete for coveted top-paying positions (Lazear and Rosen, 1981). Under efficiency wage and implicit contract models, increased work effort on the part of employees is fear induced. Because of the favorable nature of the firm's compensation scheme, employees value continued employment with the firm, and thus avoid engaging in activities, such as shirking or malfeasance, which might lead to the

termination of their employment. This differs from the tournament models where increased productivity is thought to occur as a by-product of employee competition to win the "prize." Recent empirical studies that have tested these models provide some support for the productivity enhancing effects of these policies (Ehrenberg, 1990).

In the organization literature, expectancy theory (Lawler, 1973) and equity theory (Lawler, 1968) are generally used to explain the existence of a positive relationship between pay and productivity. Under expectancy theory, employees are thought to work harder when they believe that hard work will be rewarded by the organization. According to equity theory, an employee who perceives him or herself as being overrewarded compared to some referent other will feel an inequity and seek to redress it (Pritchard, 1969). This may lead to an increase in work effort on the part of the employee. Similarly, employees who believe themselves to be underrewarded will respond by decreasing their work effort. The arguments presented in equity theory are conceptually similar to Akerloff's (1984) version of efficiency wage theory. Akerloff (1984) argued that the firm gives workers a gift in the form of above market wages and in exchange workers give the firm a gift in the form of higher productivity.

The organizational behavior literature has also focused on "the design of work procedures or a control system that will allow the monitoring and evaluation of the employees' discrete performance" (Jones, 1985, p. 693). That is, attention is directed away from encouraging self-monitoring on the part of employees to improving opportunities for effective employer monitoring. Jones (1985) suggests two changes in organizational structure which might reduce employee shirking. First, increasing the level of vertical differentiation, and the consequent development of hierarchical authority, should increase the effectiveness of supervisory monitoring, and hence reduce employee shirking. Second, increasing the level of horizontal differentiation should lead to increases in monitoring effectiveness "because supervisors will have a conception of appropriate subordinate performance based on their own task knowledge" (Jones, 1985, p. 692). Unfortunately,

there have not been any attempts to test the impact of these changes on employee shirking.

In addition, work by Weldon and her associates (Weldon and Gargano, 1985; Weldon and Mustari, 1988) suggests that group-level variables such as anonymity and shared responsibility affect individual effort. Individuals who believe that responsibility for task performance is shared by others presumably would exert less effort than those who felt they bore sole responsibility for task performance. Indeed, their research provides support for the importance of shared responsibility in student cognitive effort. However, the studies have been conducted in the laboratory, where the manipulations and tasks bear only indirect similarity to the world of work.

The basic theme found throughout these shirking literatures is that shirking is an organizational problem which can be "corrected" via implementation of various organizational policies. While few people would disagree that employee shirking represents a serious problem which deserves remedial action, the organizational focus of the shirking literature ignores its individual-level determinants. Greater attention must be given to the fact that individual employees bring to the organization a "bundle" of characteristics which significantly affect their participation within the organization. Further, individuals working in similar work environments may form very different perceptions of their job based on past experience and other personal characteristics (e.g., dispositions). Attention must be given to personal characteristics of employees which will cause differences in the degree of shirking to exist for employees who work under identical working conditions or compensation schemes. Knowledge of individual-level determinants of shirking may provide helpful information regarding possible remedies to shirking.

CONCEPTUAL MODEL

Employee shirking may be similar to employee withdrawal. Judge (1990) found that those who were more likely to be absent, tardy, and miss meetings were also less likely to give full effort on the job. Thus, existing literature on withdrawal behaviors

may help identify individual-level determinants of shirking. Particularly appropriate in this case is an employee's decision to quit his or her job. From the firm's perspective, both employee quitting and employee shirking result in a decrease in an employee's productive contribution to the firm. The difference between the two lies in degree. When employees quit their jobs their contribution to the firm goes to zero, while the decrease in contribution resulting from shirking depends on the level of employee shirking. Further, since both the decision to quit one's job and the decision to shirk result in either actual or potential termination of the employment relationship, these decisions should be based on the employee's assessment of their current job and their alternative employment opportunities. Just as "the relative attractiveness of one's current job should negatively influence quitting" (Blau and Kahn, 1981, p. 565), the relative attractiveness of one's current job should also negatively influence shirking.

Existing literature in economics and organizational behavior which examines employee shirking and employees' decisions to quit their jobs suggests that employee shirking should be significantly affected by an employees' job satisfaction² and dispositional affect (AFFECT), their alternatives in the labor market (LABMKT), and the extent of employer monitoring (MONIT). That is,

$$\text{SHIRKING} = f(\text{AFFECT}, \text{LABMKT}, \text{MONIT}).$$

In this model, shirking is defined as a lack of employee work effort. Any tendency on the part of workers to give less than full effort on the job would be shirking, with greater deviations from 100 percent effort representing greater levels of shirking. This is clearly distinct from performance, where investigations of the relationship between job satisfaction and performance have often yielded disappointing results (Iaffaldano and Muchinsky, 1985; Schwab and Cummings, 1970). Kanfer (in press) and Naylor, Pritchard, and Ilgen (1980) define many contingencies that make the relationship between effort and performance far from perfect. Because of the complex nature of performance, both in terms of its antecedents and measurements (Bernardin and Beatty,

1984), it has often been difficult to uncover consistent predictors of performance (Naylor et al., 1980). However, work effort is thought to be less subject to the complex array of factors that influence performance. It may be more useful to investigate job satisfaction as a predictor of effort, because effort is much more within the individual's control than performance (Porter and Lawler, 1968; Schwab, Olian-Gottlieb, and Heneman, 1979). Therefore, the inability of prior research to identify determinants of performance does not imply that similar problems will exist when examining employee shirking.

Affect

Although affect can be directed toward, and derived from, many sources, a useful distinction in organizational research may be to dichotomize affect as that experienced from the job (i.e., job satisfaction), or that experienced in general (overall happiness or well-being) (George, 1989). Job satisfaction has repeatedly been shown to predict withdrawal and other work behaviors such as turnover, absenteeism, and tardiness (Hulin, Roznowski, and Hachiya, 1985; Rosse and Miller, 1984). If workers dissatisfied with their job are less likely to be at work through absence, tardiness, or quitting, they also might be less likely to give full effort while on the job. In fact, Hulin et al. (1985) has expanded upon the narrow range of withdrawal behaviors typically investigated by arguing that many work role behaviors can be predicted by job satisfaction, and these isolated behaviors are linked because they all entail taking actions to adapt to a job the worker dislikes. Although Hulin et al. (1985) did not explicitly include shirking in their model, given the conceptual similarity between shirking and other withdrawal behaviors such as turnover reviewed above, it is reasonable to believe shirking will be predicted by job satisfaction as well. Individuals dissatisfied with the conditions of their employment contract are expected to be less inclined to work hard at their obligations under the contract.

Similar predictions regarding the job satisfaction - shirking relationship can be derived from recent developments in expectancy theory. Naylor et al. (1980) contended

that work effort is likely to depend on the affect anticipated to result from one's efforts. Individuals will direct their work efforts toward those activities most likely to result in high satisfaction levels in the future. Hulin (in press) has argued that present satisfaction levels may heavily influence anticipated affect. Therefore, it is possible that current levels of job satisfaction will predict the level of effort expended by the worker.

A more general type of affect would include happiness and satisfaction with one's life as a whole. While it has not often been related to job behaviors, dispositional research has suggested that those unhappy with their life are more likely to be dissatisfied with their job (Staw and Ross, 1985; Staw, Bell, and Clausen, 1986; Weitz, 1952), more likely to make attempts to change their behavior at work (George, 1989; Judge, 1990), and less likely to display vigor for one's activities in life (Diener, 1984). This lack of zeal may translate to the job, where unhappy employees might be more willing to shirk their job responsibilities.

Labor Market Alternatives

The economic literature stresses the importance of alternative employment opportunities as determinants of employee shirking (Shapiro and Stiglitz, 1984). Since the penalty for being caught shirking may be termination of employment, workers who have more favorable alternative employment opportunities have much less to lose from shirking. This suggests that the same factors which influence workers' decisions to quit their jobs, i.e., search costs, should similarly affect employee shirking. Two factors should be particularly important to employees in this regard--their experience with offers of alternative employment and the expected duration of unemployment if fired for shirking. Employees who anticipate little difficulty in obtaining alternative employment of similar quality to their current employment will be less concerned with the consequences of getting caught shirking on the job. As a result, personal characteristics of workers and external labor market conditions which reduce the cost of job search would be expected to increase the level of employee shirking.

The role of the labor market in shaping withdrawal behavior has been investigated in the organization literature as well. The importance of the perception of employment opportunity and ease of movement with respect to turnover has been reviewed by Steel and Griffeth (1989). As the authors point out, workers who feel it would take a long time to find a comparable job or have no present alternatives in the labor market should be more hesitant to quit. For the same reason, workers perceiving a long queue in the labor market are expected to be less willing to bear the risk of shirking.

Monitoring

Consistent with the shirking literature, the degree to which an employee shirks should depend to a large extent on the amount of employer monitoring, both actual and perceived (Jones, 1985). Employees whose work is highly monitored, or who perceive their work as highly monitored, should shirk less due to increases in the probability that shirking will be detected.

EMPIRICAL MODEL

In order to test the model put forth above, the following equation was estimated:

$$\text{SHIRKING} = f(\text{SUBJECTIVE WELL-BEING, JOB SATISFACTION, OFFER IN LAST YEAR, TIME TO FIND A JOB OF COMPARABLE PAY, WAGE RESIDUAL, MARITAL STATUS, AGE, CERTIFICATION, EDUCATION, SPAN OF CONTROL, RACE}).$$

The variables used in the analysis are described in Table 1.

Table 1 about here

The variables SUBJECTIVE WELL-BEING and JOB SATISFACTION are included to measure the importance of job affect to a worker's propensity to shirk. Subjective well-being is a concept from the personality literature that refers to the degree to which individuals are happy and satisfied with their lives (Diener, 1984). It is closely related to

measurements of affective disposition that have appeared in the organization literature (Levin and Stokes, 1989; Staw et al., 1986). This dispositional approach argues that the ongoing affective state of the individual exerts a significant effect on individuals' work attitudes and behaviors.

George (1989) expanded upon existing dispositional research by linking affective states to withdrawal behaviors. She found that mood at work significantly influenced number of days absent. Further, George's (1989) results indicated that mood also significantly predicted intentions to leave the organization. If general affective states, as manifested by subjective well-being, influence absenteeism and turnover intentions, it is also reasonable to expect that they will exert significant influences on shirking behavior. Because those unhappy may often engage in "mood repair" by trading work for leisure to lift their spirits, workers with low levels of subjective well-being are hypothesized to be more likely to shirk.

The second affective variable, job satisfaction, is also hypothesized to influence shirking. Much past research has suggested that workers disliking their job are more likely to engage in withdrawal or adaptive behaviors on the job. Behavioral examples that past research has linked job satisfaction to include: quitting (Mobley, Horner, and Hollingsworth, 1978; Price and Mueller, 1981), absenteeism (Rosse and Miller, 1984), tardiness (Adler and Golan, 1981), retirement (Hanisch and Hulin, in press), and unionization (Bigoness, 1978; Getman, Goldberg, and Herman; 1976 Hammer and Berman, 1981; Hamner and Smith, 1978; Kochan, 1979). In light of Hulin et al.'s (1985) suggestion that these behaviors may be invoked as an adaptive response to individual's level of job dissatisfaction, one means of coping with a job one dislikes is to simply spend less time doing it. Although job dissatisfaction has not been previously studied as a possible cause of shirking, shirking can be expected to be adaptive just as much as any of the behaviors suggested by Hulin et al. (1985). In fact, quitting and being absent or late, due to organizational sanctions and economic factors, may not be feasible for all workers. If

these alternatives are blocked, workers who dislike their jobs may shirk instead. As suggested earlier, dissatisfied employees are expected to be less inclined to provide full effort on their job. Therefore, it is hypothesized that job satisfaction will negatively predict shirking.

The variables OFFER IN LAST YEAR, TIME TO FIND JOB OF COMPARABLE PAY, CERTIFICATION, EDUCATION, WAGE RESIDUAL, AGE, and MARITAL STATUS are all related to how an employee is likely to view their alternative employment opportunities. Employees who have received other job offers, or who believe it would not take long to find a job of comparable pay, will view shirking as being less costly. As a result, TIME TO FIND JOB OF COMPARABLE PAY should be negatively associated with the propensity to shirk and OFFER IN LAST YEAR should be positively associated with the propensity to shirk.³ Further, the difference between the wage one would predict an employee to have based on his or her individual characteristics and his or her actual wage (i.e., WAGE RESIDUAL) should be positively associated with shirking. Consistent with equity theory, employees who perceive themselves as being underrewarded relative to their co-workers will reduce their work effort.

Due to their possible effects on productivity, and because they may serve as signalling devices, higher levels of education and professional certification are likely to be valued in the labor market. Because of greater opportunities in the labor market resulting from higher levels of education and professional certification, the consequences of being discharged for shirking should be less onerous for those possessing these characteristics. Thus, EDUCATION and CERTIFICATION should be positively associated with the propensity to shirk.⁴ Past research on job search by U.S. workers indicates that job changes are more likely to occur early in a person's working career (Hall, 1982), suggesting that as workers get older, they prefer to remain with their current employer.⁵ This preference to avoid late-career job changes suggests that older workers should be less likely to engage in behavior such as shirking that might lead to termination of their

employment. Finally, employees' marital status should affect their propensity to shirk. Married employees are likely to have greater family responsibilities. The psychological burden of providing, if only in part, for one's family may make workers less likely to engage in behaviors that may endanger their dependents' source of support. Thus, being married may increase the psychic cost of being caught shirking. In addition, marriage is often thought to have a "stabilizing influence" on people (Viscusi, 1979) which could reduce the extent to which they engage in "risky" behavior at work. These factors should decrease the level of shirking for married employees compared to nonmarried employees.

The last two variables in the equation, SPAN OF CONTROL and RACE, are included to capture the effects of employer monitoring on employee shirking. The number of employees reporting to each supervisor, SPAN OF CONTROL, should be positively associated with employee shirking, other things equal. Employees who work in departments where the number of employees per supervisor is high are less likely to get caught shirking since supervisors have less opportunity to monitor individual employee's behavior. Under these conditions the extent of employee shirking should increase. Further, RACE should be negatively associated with the propensity to shirk. This relationship is predicted because minority employees are likely to be subject to greater scrutiny (or perceive themselves as being subject to greater scrutiny) at the workplace, perhaps due to being seen as members of an outgroup (Pfeffer, 1983) and subjects of tokenistic pressures (Kanter, 1977). As a result, minority employees are likely to face (or perceive themselves as facing) a higher probability of being caught shirking than nonminorities. This should make minorities more reluctant to shirk.

Methods

The data used for the analyses were collected from a survey of members of the nursing profession at a large nonunionized Midwestern clinic. Respondents included medical office assistants, licensed practical and registered nurses, and nurse clinicians and technicians. All but two respondents were women. Approximately 80% of those eligible

completed usable surveys (n=252). Participation was completely voluntary and confidentiality was emphasized to insure accurate responses. Respondents completed five different subjective well-being scales, chosen for their desirable measurement properties described in Diener (1984). Workers also responded to questions assessing their job satisfaction and reported if they had received an offer for alternative employment in the last year, if they had been professionally certified, their educational attainment, age, race, marital status, wage rate, and time it would take them to find a job of comparable pay. It should be noted that all of the employees surveyed were subjected to the same company policies and all were subjected to the same compensation practices. Thus, the study's design controls for organizational practices which might cause differences to be observed in the propensity of employees to shirk.

Shirking was assessed by asking the respondents how often they give 100% on the job, and about their intentions to give less than 100% in the future. Intention information has been found to be an accurate predictor of withdrawal behaviors (Hanisch and Hulin, in press; Martocchio, 1989; Miller, Katerberg, and Hulin, 1979; Mobley et al., 1978; Rosse, 1983). In addition, the supervisor was asked to appraise how often the respondent gives less than 100% on the job. Using a composite measure of individual and supervisor report of past shirking behavior should yield an accurate measure of shirking, short of the unlikely actual observation of shirking behavior by the researcher. In short, the combination of supervisor and self-reports of shirking behavior should yield an objective, and relatively direct, measure of shirking.

ESTIMATION AND RESULTS

Estimates of the effect of the independent variables on shirking were obtained using two estimation procedures. First, all independent variables except WAGE RESIDUAL were assumed to be exogenous, and the equation was estimated using ordinary least squares (OLS). Second, for reasons explained shortly, the equation was estimated

allowing job satisfaction to be endogenously determined, and the resulting structural equations model was estimated using LISREL 7 (Joreskog and Sorbom, 1989).

Because of the different measures used to assess shirking, job satisfaction, and subjective well-being, confirmatory factor analysis was conducted. Confirmatory factor analysis allows one to determine if the measures represent a common underlying construct (Long, 1983). Weights and fit statistics derived from the confirmatory factor analysis results yield an estimate of the degree to which each variable represents the common construct. In order to estimate if the three measures of shirking adequately represented and contributed unique variance to an underlying shirking construct, the three measures of shirking were constrained to load on a single construct. All three measurement loadings were statistically significant ($p < .01$), indicating that each measure contributes significant variance to the shirking construct. Results of the confirmatory factor estimation for the overall measurement model revealed that the different measurements of job satisfaction, subjective well-being, and shirking adequately represented their respective constructs.⁶ For the other variables used in the analysis, no measurement model is specified. They were treated as manifest and assumed to be measured with negligible error. For example, it was assumed that certification, age, race, and so forth were reported by the employee with a minimum of error.

WAGE RESIDUAL, as described in Table 1, and for reasons explained earlier, is the residual of actual minus predicted wage. The endogenous estimation of wage was based on the following structural equation:

$$\text{WAGE} = f(\text{TRAINING}, \text{EDUCATION}, \text{EXPERIENCE}, \text{EXPERIENCE}^2, \text{CERTIFICATION}, \text{AGE}, \text{RACE}).$$

The coefficient of determination for this equation was .46. The actual minus predicted values were included in the shirking equation.

Results with Job Satisfaction Treated as Exogenous

Table 2 provides results of the OLS estimation. Standardized and unstandardized estimates are provided. Table 2 indicates that several significant influences on shirking were identified. As hypothesized, whites were significantly more likely to shirk. Married workers were slightly less likely to shirk. Education led to slightly higher levels of shirking. Also as hypothesized, older workers were significantly less likely to shirk. Finally, both those dissatisfied with their job and unhappy in general (low subjective well-being) were significantly more likely to shirk, consistent with past dispositional and withdrawal research.

Table 2 about here

It is possible that job satisfaction and perceived labor market alternatives interact in determining shirking behavior. A dissatisfied worker may engage in several reactive behaviors, perhaps the first choice being quitting (depending on the labor market). This raises the possibility that only workers with few labor market alternatives will react to job dissatisfaction by shirking (those that have more options may react by quitting). However, an interaction between job satisfaction and perceived time to find a job of comparable pay did not add a significant amount of variance when added to the shirking equation.

Span of control was not significant, suggesting that closeness of supervision does not lead to less shirking. Overall, it was somewhat surprising that some of the variables were not significant in the equation. It was thought that perhaps one explanation might be that there was little variation in the nonsignificant variables. Obviously, independent variables that have little variance themselves have less power to explain variance in the dependent variable. For example, labor market variables could not explain much variance in job satisfaction if members of the sample differed little in their perception of market

conditions. If this were the case, the labor market variables would not represent a valid test of the influence of the market on shirking. However, the coefficients of variation for the perceived labor market variables were not smaller than the significant variables (e.g., $C(v)=.98$ for CERTIFICATION, $C(v)=1.06$ for OFFER IN LAST YEAR, $C(v)=.28$ for WAGE RESIDUAL, $C(v)=.38$ for TIME TO FIND A JOB OF COMPARABLE PAY, $C(v)=.41$ for EDUCATION, $C(v)=.22$ for JOB SATISFACTION, and $C(v)=.13$ for SUBJECTIVE WELL-BEING). Nonetheless, a multi-profession/occupation sample, facing a different labor market, is needed to examine the replicability of the present findings.

Results with Job Satisfaction Treated as Endogenous

The dispositional studies on job satisfaction reviewed earlier have strongly suggested that job satisfaction depends on worker well-being (Staw and Ross, 1985; Staw et al., 1986; Weitz, 1952). It is also quite possible that job satisfaction is endogenously determined by many of the other variables in the model. Wages (Dyer and Theriault, 1976; Heneman, 1985; Miceli and Lane, in press), education (Jencks, Perman, and Rainwater, 1988; Kalleberg, 1977; Weaver, 1977), and labor market factors (Hulin, in press; Hulin et al., 1985; Rosse and Hulin, 1985) all have been identified by past research as influences on job satisfaction. Because many of these variables may indirectly influence shirking as mediated through job satisfaction, the total (direct plus indirect) effect of some of the independent variables on shirking may be understated by failing to account for the endogenous nature of job satisfaction. The job satisfaction equation was:

$$\text{JOB SATISFACTION} = f(\text{WAGE RESIDUAL, CERTIFICATION, TIME TO FIND} \\ \text{JOB, SUBJECTIVE WELL-BEING, OFFER IN LAST YEAR,} \\ \text{EDUCATION})$$

The predicted values for job satisfaction were substituted for the actual values in the shirking equation. The coefficient of determination for this equation was .28. Specific coefficient estimates for the job satisfaction equation are not reported here but are available upon request.

Using maximum likelihood estimation with job satisfaction treated endogenously did not substantially affect the OLS results reviewed earlier. Table 3 reveals that all variables significant in the OLS estimation, with the exception of education and marital status (which were only marginally significant in the OLS equation), remain significant in the maximum likelihood estimation. Thus, the maximum likelihood estimation generally confirms the results reported in Table 1. LISREL provides several statistics on the overall fit of the model. All fit statistics, reported in Table 3, indicate that the data fit the hypothesized model very well (see La Du and Tanaka, 1989, for a review of these fit statistics). The total effects of the independent variables were similar to the direct effects reported in Table 3, with the exception that subjective well-being had a significant indirect effect ($-.126$; $p < .05$) on shirking, making the total effect $-.294$ ($p < .01$).

Table 3 about here

Because shirking was argued to be an adaptive behavior invoked in response to job dissatisfaction, it is possible that shirking will affect workers' current level of job satisfaction. In response to this possibility, shirking was added to the job satisfaction equation. The coefficient on shirking was not significant, nor did the addition of shirking improve the fit of the overall structural model. It may be that shirking does not have a simultaneous effect on job satisfaction, but perhaps only an effect realized over time. Future research utilizing longitudinal data would be particularly useful in this regard.

DISCUSSION AND CONCLUSION

The results of this study provide several contributions to the shirking literature. First, this study provides the first attempt to operationalize shirking. Previous empirical research on employee shirking has tended to use some measure of employee productivity as a measure of shirking. Although such measures are useful, they are measures of

shirking outcomes rather than shirking itself. We have abandoned this practice by developing a measure of shirking which relies on both employee and supervisor assessments of work effort.

Second, we have developed a model of employee shirking which includes measures of job satisfaction and employee affect (subjective well-being). Previous discussions of employee shirking have failed to recognize the possible importance of these variables as determinants of shirking. Our findings indicate that these factors significantly impact the extent of employee shirking. With regard to job satisfaction, the results suggest that identification of possible sources of job dissatisfaction and the implementation of corrective programs can significantly reduce shirking. This provides an additional avenue which can be pursued by firms wishing to increase employee productivity.

The findings related to employee affect are of less practical importance, since considerable practical and ethical issues are involved in altering the happiness of organizational members. Nonetheless, the significant, negative effect of subjective well-being on employee shirking is of interest. It has extended the dispositional approach by linking shirking to subjective well-being. The role of dispositional states such as subjective well-being, then, has been found not to be confined to job satisfaction, but influences an important work behavior as well. While it may be difficult (and perhaps unethical) for organizations to change dispositional tendencies, the fact that those unhappy in life are more likely to shirk is an important fact for both organizations and workers to consider. Further, because subjective well-being is related to job satisfaction, it also includes an indirect effect on shirking. The significant total effect of subjective well-being on shirking indicates that shirking is not wholly determined by organization policies and practices. While this does not imply that shirking behavior is immutable, it does add to the existing set of variables thought to influence shirking behavior.

Third, our results suggest that employees who have the most to lose from shirking shirk less, although perhaps only to a modest degree. Specifically, our results indicate

that older employees, and to an uncertain extent married and less educated employees, will shirk less. The negative relationship observed between age and shirking appears to be consistent with prior research indicating that older workers are less inclined to change jobs (Hall, 1982). However, it should be noted that since age is likely to be highly correlated with tenure, this finding may also indicate that workers who shirk less are likely to be employed by the firm longer. That is, rather than representing behavioral differences between older and younger workers, this finding may simply indicate that this firm has been successful in identifying and ridding itself of employees who demonstrate a greater propensity to shirk.

Interestingly, the number of offers received by an employee in the past year, the difference between an employee's predicted and actual wages, and an employee's perception of the amount of time it would take to find a job of comparable pay, did not have significant effects on shirking. It seems somewhat surprising that these more direct measures of relative employment opportunities are insignificant, while the personal characteristic variables were significant. One explanation could be that all these variables are so highly interrelated that inclusion of all of them in the estimating equation decreases the probability that they will obtain statistical significance.⁷ However, the multiple correlation coefficient between OFFER IN LAST YEAR and the variables AGE, MARITAL STATUS, EDUCATION, TIME TO FIND JOB OF COMPARABLE PAY and WAGE RESIDUAL is only .22. The multiple correlation coefficient between TIME TO FIND JOB OF COMPARABLE PAY and these variables is only .23. These correlations do not constitute anything close to collinear relations; thus the relatively weak relationships between these variable and shirking is not due to inflated standard errors caused by strong relationships between the independent variables.

Of course, it is also possible that labor market factors are not determinative of the degree of employee shirking. The labor market hypothesis presupposes market rationality in shirking decisions. The role of dispositional tendencies suggests that not all of the

variance in shirking is due to weighing inducements versus contributions from the job with an eye toward alternatives in the labor market. Interestingly, Steel and Griffeth's (1989) meta-analysis of the effect of perceived labor market variables on turnover yields the same weak effect. Gerhart (in press) and Steel and Griffeth (1989) suggest that samples of occupationally heterogeneous workers would likely yield higher effects of perceived employment opportunity on turnover. Given the relatively narrow range of occupations in the present sample, the same argument may apply to shirking behavior.

Finally, the results related to employer monitoring were mixed. The coefficient estimate on SPAN OF CONTROL was not significant. This indicates that increased opportunities to monitor employee behavior which result from a lower employee to supervisor ratio does not significantly reduce shirking. This finding appears to be inconsistent with evidence reviewed earlier. However, several caveats are in order. First, the work being performed by respondents in this study tends to be unstructured and requires specialized skills, both of which make monitoring more difficult (Jones, 1984). Second, responsibility for tasks is generally not shared. This makes an employee's individual output identifiable, thus providing disincentives for employees to shirk (Harkins and Petty, 1982). Finally, the tasks engaged in by these health care professionals may be of such importance as to provide sufficient motivation for performance, as suggested by Hackman and Oldham (1980). These job/career related effects may very well have negated any shirking effects generally associated with increased opportunities for direct supervision.

With regard to race, the results indicate that black employees shirk less than non-blacks. As indicated previously, these results may indicate that black employees believe, rightly or wrongly, that they face a higher probability of being caught shirking and thus shirk less than nonblacks. However, acceptance of this interpretation is subject to some criticism. One could argue, for instance, that the same conditions which cause black employees to fear being caught shirking are likely to cause black employees to

underestimate the degree to which they shirk. Thus, this finding should be interpreted cautiously.

By demonstrating the importance of individual-level determinants of shirking, this study suggests the need to expand future research on this issue beyond its current focus on organizational factors. Future research should also define the type of work and jobs in which shirking is a relevant construct. Although shirking is a lack of work effort, it may only be a relevant construct where there is group responsibility for performance. If performance is not collective, task responsibility cannot be assumed by another party. In addition, future studies on the impact of organizational practices on employee shirking should allow for the possibility that their effects may depend on specific employee characteristics. The results of the present study suggest that given organizational policies and practices, individual characteristics significantly influence whether or not shirking will occur. Advancements in this area along with existing literature on organizational factors affecting shirking should greatly assist managers in their effort to combat problems associated with employee shirking. However, given the stability of most of these individual-level characteristics, altering the level of shirking may not be as simple as many researchers investigating the phenomenon have previously assumed.

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TABLE 1

Variables Used in the Analysis of the Propensity to Shirk

SHIRKING is a composite variable comprised of 3 measures: 1) worker report of how often they had given less than 100% in the past; 2) worker report of their intentions to give 100% in the future; 3) supervisor report of how often the worker had given less than 100% in the past. All three were assessed on a 1-5 point scale.

SPAN OF CONTROL is a continuous variable representing the number of employees reporting to each supervisor in the worker's department.

RACE is a dichotomous variable representing worker's race (1=white; 0=otherwise).

WAGE RESIDUAL is a continuous variable representing the difference between the workers' actual hourly wage rate and the wage rate that one would predict them to have based on their personal characteristics.

CERTIFICATION is a dichotomous variable representing if the worker has been professionally certified (1=yes; 0=no).

TIME TO FIND A JOB OF COMPARABLE PAY is a variable representing the estimated time it would take a worker to find a job of comparable pay measured on a 1-6 point scale (1=a day or two; 6=about 2 years).

SUBJECTIVE WELL-BEING represents the average level of overall happiness the worker has experienced in the past. It is a composite variable comprised of three continuous scales and two single-item measures. The reliabilities of the continuous scales ranged from .86 to .92.

MARITAL STATUS is a dichotomous variable representing if the worker is married (1=yes; 0=no).

AGE is a continuous variable representing the age of the worker.

OFFER IN LAST YEAR is a dichotomous variable representing whether the worker received an offer in the past year (1=yes; 0=no).

JOB SATISFACTION represents the level of job satisfaction workers have with five components of their job (pay, promotion, supervision, co-workers, and the work itself), measured by the Job Descriptive Index (Smith, Kendall, and Hulin, 1969). Scale reliabilities ranged from .85 (work satisfaction) to .92 (promotion satisfaction).

EDUCATION represents the highest educational attainment achieved by the worker measured on a 1 to 5 point scale (1=high school diploma, 5=master's degree).

TRAINING represents the level of training of the worker measured on a 1 to 5 scale (1=medical office assistant; 2=licensed practical nurse; 3=registered nurse without Bachelor of Science in Nursing; 4=registered nurse with Bachelor of Science in Nursing; 5=clinical specialist or certified nurse practitioner (Masters degree required)).

EXPERIENCE is a continuous variable representing the number of years of occupational experience of the worker.

TABLE 2

ORDINARY LEAST SQUARES ESTIMATES PREDICTING SHIRKING BEHAVIOR

<u>Variable</u>	<u>Unstandardized Coefficient</u>	<u>Standardized Coefficient</u>	<u>Standard Error</u>
Span of Control	-0.0004	-0.006	0.004
Race	1.089 [*]	0.122	0.547
Wage Residual	-0.001	-0.002	0.035
Certification	-0.032	-0.014	0.140
Time to Find Job of Comparable Pay	0.040	0.030	0.081
Subjective Well-being	-0.007 [*]	-0.126	0.004
Marital Status	-0.199 ⁺	-0.079	0.156
Age	-0.021 ^{**}	-0.174	0.007
Offer in Last Year	-0.065	-0.029	0.141
Job Satisfaction	-0.017 ^{**}	-0.230	0.005
Education	0.103 ⁺	0.085	0.076
Intercept	-0.415	-----	0.644
R ²	0.15		
N	252		

⁺ p < .10; ^{*} p < .05; ^{**} p < .01 (one-tailed test).

TABLE 3

MAXIMUM LIKELIHOOD ESTIMATES PREDICTING SHIRKING BEHAVIOR

<u>Variable</u>	<u>Parameter Estimate</u>	<u>Standard Error</u>
Span of Control	-0.025	0.078
Race	0.162*	0.079
Wage Residual	-0.036	0.079
Certification	-0.004	0.081
Time to Find Job of Comparable Pay	0.024	0.080
Subjective Well-being	-0.182*	0.104
Marital Status	-0.082	0.079
Age	-0.225**	0.079
Offer in Last Year	-0.034	0.082
Job Satisfaction	-0.221*	0.115
Education	0.083	0.080
R ²	0.22	
N	252	
Chi-Square/Degrees of Freedom	1.477	
Goodness of Fit Index	0.919	
Root Mean Square Residual	0.055	

* p < .05; ** p < .01 (one-tailed test).

Notes

¹ A study by Robert M. Hutchens (1987) indicates that the presence of monitoring difficulties causes firms to implement specific compensation policies to minimize employee shirking.

² Of course, job satisfaction is not solely an individual difference variable; technology, work structuring, and compensation practices are a few of the many organization-level variables that may influence job satisfaction. However, job satisfaction is inherently a personal judgment subject to many perceptual influences unique to the individual (Hulin, Roznowski, and Hachiya, 1985) and thus can reasonably be construed as a variable that is likely to differ between individuals.

³ Because one's perception of alternative employment opportunities may depend on the factors that actually cause alternative employment opportunities, it is possible that estimated time to find a job of comparable pay is endogenously determined in the equation. Therefore, time to find a job of comparable pay was regressed on education, certification, and offer in the last year, and those predicted values were substituted into the shirking equation. No coefficients changed significance. Therefore, the treatment of time to find a job of comparable pay as exogenous does not significantly affect the results presented later.

⁴ As pointed out by Wallace Hendricks on an earlier draft of this paper, if EDUCATION and CERTIFICATION represent ability, these factors may also be positively related to shirking because high ability employees would not have to work as hard as those with lower abilities to meet the performance standards existing within the firm.

⁵ See Hutchens (1988) for a discussion of why older workers might prefer to avoid late career job changes.

⁶ The fit statistics were (see La Du and Tanaka, 1989, for explanations): Chi-square=78.58; Chi-square/degrees of freedom=1.27; Goodness of Fit Index=.935; Root Mean Square Residual=.049. All measurements significantly loaded on their respective factors ($p < .01$).

⁷ Examination of the simple correlation matrix does not indicate problems with multicollinearity. Nonetheless, such problems may still exist if high correlations are present among more than just pairs of variables.